Exhibit 4: Concurrent Implementation of All Four Goals

A four-phase IT goal implementation approach, implemented concurrently, will achieve Mayoral/Council IT initiative goals.

Concurrent Implementations

Phase 1	**Stabilize IT Operations** **FY 1999-2000**
Phase 2	**Build Enabling IT Infrastructures** **FY 2000-2003**
Phase 3	**Implement Citywide Applications** **FY 2001-2004**
Phase 4	**Integrate Citywide Services and Information** **FY 2001-2005**

Mayoral/Council IT Initiatives

Foundation Initiative:
- All Basic Business Processes Work

Expanded Initiatives:
- National Municipal Web Portal
- Unified Communications Center
- McKinley Technology Campus
- Urban Technology Village

IT Transformation Goals and Programs

We've set four goals, two foundation goals and two expanded capability goals, for transforming the District's current IT environment and realizing our vision of a city of access. The four goals are:

Foundation Goals:
- Stabilize IT operations.
- Build enabling IT infrastructures.

Expanded Capability Goals:
- Implement citywide applications.
- Integrate citywide services and information.

The programs of the two foundation goals address the District's needs in IT management, budgeting, data access, and telecommunications infrastructure. The expanded capability programs develop the IT applications we need to implement citywide action plans, improve the quality and efficiency of city services, and enhance residents' access to the District government.

Together, the four goals cover 34 programs and 144 projects, which are described below and shown at a glance in Exhibit 2. These projects have been launched under OCTO management and have an impact citywide. The District's total investment in IT also includes a variety of projects underway in individual agencies using OCTO technical standards.

As shown in Exhibit 4, we're pursuing the four goals during 1999-2005 in phases that are, necessarily, both sequential and concurrent. Foundational management programs and some infrastructure projects must be complete before we can develop expanded capability applications. However, some applications are so critical that we've had to get them underway before completing all the infrastructure projects in the foundation goals.

Goal: Stabilize IT Operations

The programs of the first foundation goal are to establish a management and fiscal foundation upon which the District can build a city of access. These programs include our strategic plan and four other programs that address budgeting, management, and procurement processes. These programs are described seperately below. The discussion concludes with a summary of planned capital spending on all four programs.

"If the District is to keep the reins of financial independence, it has to maintain its four-year record of fiscal discipline. Centralized, coordinated capital budgeting is critical to doing so."

Representative Joe Knollenberg (R-MI)
Chairman, Subcommittee on the District of Columbia
House Appropriations Committee

IT Transformation Goals and Programs

Citywide IT Budget Plan

The Mayor and District Council have committed to significant new IT capital and operating outlays to move the District from "worst to first" in technology. However, even our new IT authorizations won't fund all the projects we'd like to undertake immediately. To ensure that we spend our IT dollars most effectively, the District has replaced the separate agency IT capital budgets of the past with a centralized, multi-year IT planning and budgeting process. The centralized IT budget process oversees capital and operating budgets for IT projects. The process is designed to ensure that IT acquisitions are coordinated throughout the District, and that each major IT project is developed through a comprehensive approach to needs assessment, functional systems design, implementation strategies, and project management.

The process begins with individual agencies submitting information about proposed IT projects for inclusion in the Office of Budget and Planning's master Capital Improvement Program (CIP). The agency must explain the agency-specific and citywide need for the project, how the project fits within the agency's mission and strategic plan, which communities or groups will benefit from the project, and whether the project assumes responsibility for functions that are within the purview of other government or private organizations. The agency must also supply cost estimates, identify possible alternative funding sources, and provide dates for completion of the scope of work, the design process, and project closeout.

OCTO reviews the proposed CIP project information. OCTO and agency staff meet to refine the budget submissions, and agency directors and the Chief Technology Officer (CTO) collaborate in finalizing them.

Proposed IT projects are then prioritized using three criteria:

- the project's contribution to the mission of the agency and the District's strategic objectives. As depicted in Exhibit 5 in the appendix, projects are ranked as mission critical (blue in Exhibit 5), mission important (yellow), or mission enhancing (green), with mission critical projects ranked highest, and mission enhancing projects lowest;

- the agency's ability to manage the project over its lifecycle, including whether there are sufficiently skilled personnel to conduct project management; and

- the thoroughness of the planning that preceded the project proposal.

The project rankings that result from the application of these criteria become the basis for allocating limited budget dollars to the projects.

Next, OCTO and agencies jointly present the prioritized project proposals to the City Administrator (CA) for final review. Final approval for IT capital and operational budgets occurs in the context of the consolidated CIP proposal, which is submitted to the Mayor and the District Council for approval and inclusion in the District budget proposal to Congress.

Procurement Policy and Procedures

In addition to coordinated IT capital budgeting, the District has implemented a centralized IT procurement process, under the direction of a District Integrated Procurement Team (IPT). The IPT, established jointly by OCTO and the Chief Procurement Officer, is a team of IT and contracting professionals with extensive experience in IT and specific expertise in IT procurement best practices. The IPT handles major IT procurements for the District.

The IPT combines all similar requests from different agencies into citywide procurements and negotiates aggressively with vendors to achieve the lowest possible prices consistent with high levels of service delivery. By consolidating IT procurements, the IPT is able to speed the acquisition of IT supplies and services and obtain substantial volume discounts.

The IPT also seeks to support and stimulate the growth of local small businesses. The IPT focuses on firms designated Local Small Disadvantaged Business Enterprises (LSDBE) by the Local Business Opportunity Commission. The IPT meets with these firms regularly to assist them in marketing to the District, and applies maximum LSDBE preferences in all solicitations.

Currently, the IPT is managing nearly 100 long-term IT contracts for the District. The IPT secures advantageously priced services from a group of strong local businesses, as well as from the nation's foremost large IT contractors. In fiscal 2001 (October 1, 2000—September 30, 2001), the IPT has saved a total of $1.3 million in IT procurement costs compared to historic spends.

Project Management Office

The Project Management Office (PMO) supports and enhances the District's centralized IT budget and procurement processes. The PMO is a centralized team of experts who provide project monitoring, tracking, reporting and management disciplines to ensure IT project success.

To support the centralized procurement process, the PMO utilizes the Program Review for Information Systems (PRIS) process for major IT procurements. PRIS ensures that IT goods and services procurements are carefully planned and consistent with the citywide systems architecture and technology standards.

For IT capital projects, which typically require the greatest expenditures, the PMO provides a series of evaluation and monitoring functions. At the start of each IT capital project, the sponsoring agency completes a Project Initiation Form (PIF) to demonstrate that the scope, schedule, and resources of the project are well-defined. Throughout the progression of an IT capital project, the PMO provides monthly project status reports, which are consolidated into the Project Office Executive Tracking System (POETS). Monthly POETS reports alert the agency and OCTO management to projects that fall behind schedule, exceed budget targets, or face

significant operational problems. As a result, agency managers and OCTO are able to identify and resolve IT implementation problems quickly and proactively.

In addition to its project-tracking system, POETS incorporates a tool that helps the PMO provide project, financial, and contract support to IT projects. The POETS financial and contract support tool includes centralized financial reporting for the CTO, and a series of financial controls that support standardized project management functions, such as tracking funding documents, paying invoices, and financial planning. This tool also includes an administrative support system that allows IT project managers to concentrate on technical project execution by transferring administrative duties to the centralized PMO.

Since 1999, the PMO has tracked projects centrally managed by OCTO. In FY 2002, the PMO will track all major IT capital projects throughout the District.

Establish Management Infrastructure

- Define agency IT skills/needs
    - Current
    - Future
- Recruit permanent IT personnel
    - Authorize competitive salaries (current)
    - Implement separate IT salary scale (future)
    - Cut offer letter turnaround to industry standard
    - Tap new hires' personal networks
    - Promote District IT agenda
    - Target program managment expertise
- Launch public-private partnerships
    - Adopt an Agency (underway)
    - Inter-agency Personnel Agreement
    - Digital Tech Corps
- Train and retain IT staff
    - Courses (program management, network operations, Microsoft Certified Engineer curriculum, Cisco routers)
    - Web Academy
- Standardize IT policies and procedures
    - Formal guidance (policy and procedure manuals)
    - Informal guidance (staff assistance, inter-agency conferences)

Management Infrastructure

Adequate IT staffing, from the CIO level down, is the District's most pressing IT management need. Working in partnership with agencies and the Office of Personnel, OCTO is pursuing a variety of initiatives to meet this need.

Define agency IT skills/needs

We're helping agencies define their IT resource requirements so they can recruit new IT staff with the specific skills they need. We help agencies identify current IT personnel needs and forecast needs they'll face in the future as the District's IT infrastructure and applications evolve.

Recruit permanent IT personnel

We've launched a multi-faceted campaign to help agencies fill CIO and IT staff positions and obtain expertise in specific technical areas. The most important element of this campaign is recruiting full-time IT staff for OCTO and District agencies.

Currently, we're working with the Office of Personnel to authorize competitive IT salaries, one position at a time. To make our recruitment efforts more efficient and effective over the long term, we're also pursuing a completely separate competitive IT salary scale. Armed with competitive salaries, we'll then sell the most attractive candidates on our jobs by emphasizing the District's advantages in position challenge, location, and commuting, and by educating candidates about the city's new commitment to be the best in IT.

To ensure that we don't lose candidates once they've accepted our offers, we're working with the Office of Personnel to eliminate the 48-60 day lag between extending employment offers and mailing formal offer letters. Our goal is to match the industry standard of mailing official offer letters within one to three days.

Finally, once new IT personnel are on board, we'll leverage our recruitment efforts. We encourage new hires to tap their own personal networks for other candidates, and to promote the District's ambitious IT agenda to attract more IT talent.

In all our recruitment efforts, OCTO and agencies are targeting program management expertise and Project Management Professional (PMP) certification as a key qualification for CIO and senior IT management positions. By ensuring that our permanent IT corps has strong program management skills, we'll build the District's IT personnel resources and strengthen our ability to manage large, simultaneous IT projects.

Launch public-private partnerships

The District is augmenting its recruitment campaigns with a series of outreach projects to supplement permanent IT staff with temporary IT professionals from private industry and universities.

Two of the initiatives are already underway. In the Adopt an Agency initiative, the District has invited civic-minded corporations to donate the services of senior IT professionals for 1,000 hours or more. To date, twelve major technology firms, including IBM, Lockheed Martin, and Verizon, have donated senior IT managers, who are now working at OCTO and agencies throughout the city. Together, these executives will contribute a total of 17,000 hours of IT expertise, saving the city approximately $4.25 million that we'd otherwise spend on IT consultants. In addition, to fill gaps created by IT staff vacations during the summer, we're offering summer internships to computer science majors from local universities. We also leverage the benefits of the Adopt an Agency and internship programs just as we do

with our new IT hires. When it's time for our summer interns and Adopt an Agency professionals to leave, we encourage them to promote the District's ambitious IT agenda at their schools and industry forums so that other talented IT graduates and managers will consider careers in the District government.

Two other major outreach initiatives are in the works. The District is developing a new expanded IT version of an expired executive loan initiative, the Inter-agency Personnel Agreement (IPA). The IPA, a provision of the District of Columbia Government Comprehensive Merit Personnel Act of 1978, allowed the District to borrow employees from government and the private sector for agencies that were unable to meet personnel needs after exhausting standard recruitment options. Under the IPA, the District reimburses the private sector personnel donor for the full costs of the executive. The revitalized initiative will be used to attract highly experienced personnel by underwriting the exchanged executive's full cost to the private employer. This initiative will help reduce our reliance on consultants, and will substitute a significantly less expensive alternative to consultants' costs.

Finally, the District is pursuing inclusion in a broader initiative, the Digital Tech Corps. The Digital Tech Corps Act of 2001 is a federal legislative proposal introduced by Representative Tom Davis (R-VA). Representative Davis' bill, H.R. 2678, would provide for the exchange of IT management expertise between the federal government and private industry. Government and private sector professionals eligible to participate in the initiative would be those designated as exceptional performers who are expected to assume greater IT management responsibilities in the future. These employees would participate in the exchange program for up to one year. A private sector IT professional could be assigned to a government agency on a transfer basis, and be paid by the government agency, or on a detail basis, and continue to be paid by the private sector employer. Representative Davis and cosponsors of the bill expect the program to help the federal government and private sector firms fill IT skills gaps, and to help government agencies reduce reliance on IT consultants. We expect that participation in the program will yield the same benefits for the District.

> *"Even our best IT people may need some on-the-job education—today, technology changes at warp speed. Whatever training our people need, we must provide. After all, education is a life-long process."*
>
> *Vincent Orange*
> *Councilmember, Ward 5*
> *District of Columbia*

Train and retain IT staff

Training is as essential to adequate IT staffing and staff retention as initially bringing new hires on board. OCTO and the Office of Personnel are helping agencies meet their needs for IT training by directing agency IT staff to appropriate training courses at the Center for Workforce Development (CWD). The Center, operated by the Office of Personnel, provides direct IT training for agency technical staff through courses and workshops in high-demand technical subjects, such as program management, network operations, Microsoft Project 2000, installation and maintenance of Cisco routers, and the multi-course Microsoft Certified Engineer curriculum. To support the District's extensive e-government projects, OCTO has launched a Web Academy that teaches web design and web maintenance skills to employees in all agencies.

Standardize IT Policies and Procedures

A critical component of our management infrastructure program is the publication of citywide resource manuals to standardize business, financial and technical IT policies in OCTO and the agencies.

Within OCTO, we publish the *OCTO Policies and Procedures Manual*, with updates twice a year. The manual establishes detailed financial policies, internal operating procedures, and business processes to guide project design, planning and execution, and to ensure that all OCTO employees and consultants adhere to common standards.

We also publish and update a series of guides that standardize technical services throughout the city. These manuals include:

- Professionals' Guide to Information Technology Architecture Standards

- Project Office Executive Tracking System (POETS) User Manual

- Web Development Kit

- Web Style Guide

- Web Technical Standards

- Wide Area Network Operational Guidelines

Most are available on the OCTO website at http://octo.dc.gov/information/sla/index.shtm or in hard copy by request. (Forthcoming updates to *Professionals' Guide to Information Technology Architecture Standards* will appear first on this website, rather than in hard copy.)

Together, these reference tools establish standards for a wide variety of IT-related functions and business processes, including architecture management, maintenance procedures, training, security, network operating systems, network operations support, network systems administration, communications and middleware, data formats,

application development, application project management, and commercial application selection. The manuals assist agencies in designing and managing IT projects, and they ensure that all projects use common IT architecture, business processes, and data and technical standards.

We supplement the formal guidance in these manuals with informal guidance on an as-needed basis. OCTO serves as a comprehensive resource center for agencies with specific technical or IT project management problems. We make our staff available to help agencies enhance high-demand technology functions such as network operations and database management. We also conduct periodic online and in-person conferences to facilitate the exchange of technical information among agency IT personnel.

Through these formal and informal technical standards initiatives, OCTO and agencies eliminate conflicting and duplicative IT solutions, establish a consistent IT architecture in all agency institutions, deploy new systems faster and more efficiently, tighten IT security protections, and stabilize IT procedures based on sound management standards.

Stabilize IT Operations
Capital Spending Summary

Program	FY 2002 ($000's)
Management Infrastructure	$2,162
Citywide IT Budget Plan	$83
Procurement Policy and Procedures	$70
Citywide Strategic Plan	OS*
Total	**$2,315**

Operational Spending

Goal: Build Enabling IT Infrastructures

The programs in the first foundation goal establish the organizational and financial groundwork for the city of access. The IT infrastructure programs in the second foundation goal lay the technical groundwork for telecommunications and data access. Broadly defined, IT infrastructure is not just hardware and operating software. It also encompasses a set of services and business processes designed to ensure that IT projects are implemented under standard architectures, are modified systematically, and are protected from unauthorized access and environmental disasters. We've launched 13 programs to build new, state-of-the-art telecommunications and data access infrastructures for the District. When these programs are complete, the District's IT infrastructure will offer advanced processing capabilities, high-speed data access and connectivity, standardized data formats and management functions, and integrated systems. Each of the 13 programs is described separately below. The discussion concludes with a summary of planned capital spending on all programs within this goal.

Consolidate Data Centers

- Consolidate mainframes
    - integrate DHS, DOES, UDC data centers to create ODC1
    - integrate CFO (SHARE) w/ OCTO to create ODC2
    - merge DMV production environment into ODC1
    - integrate MPD data center into ODC2
- Consolidate citywide server storage
- Implement enterprise data storage
    - outsource St. Elizabeths data storage
- Implement enterprise software
- Enhance data center processes
    - standardize
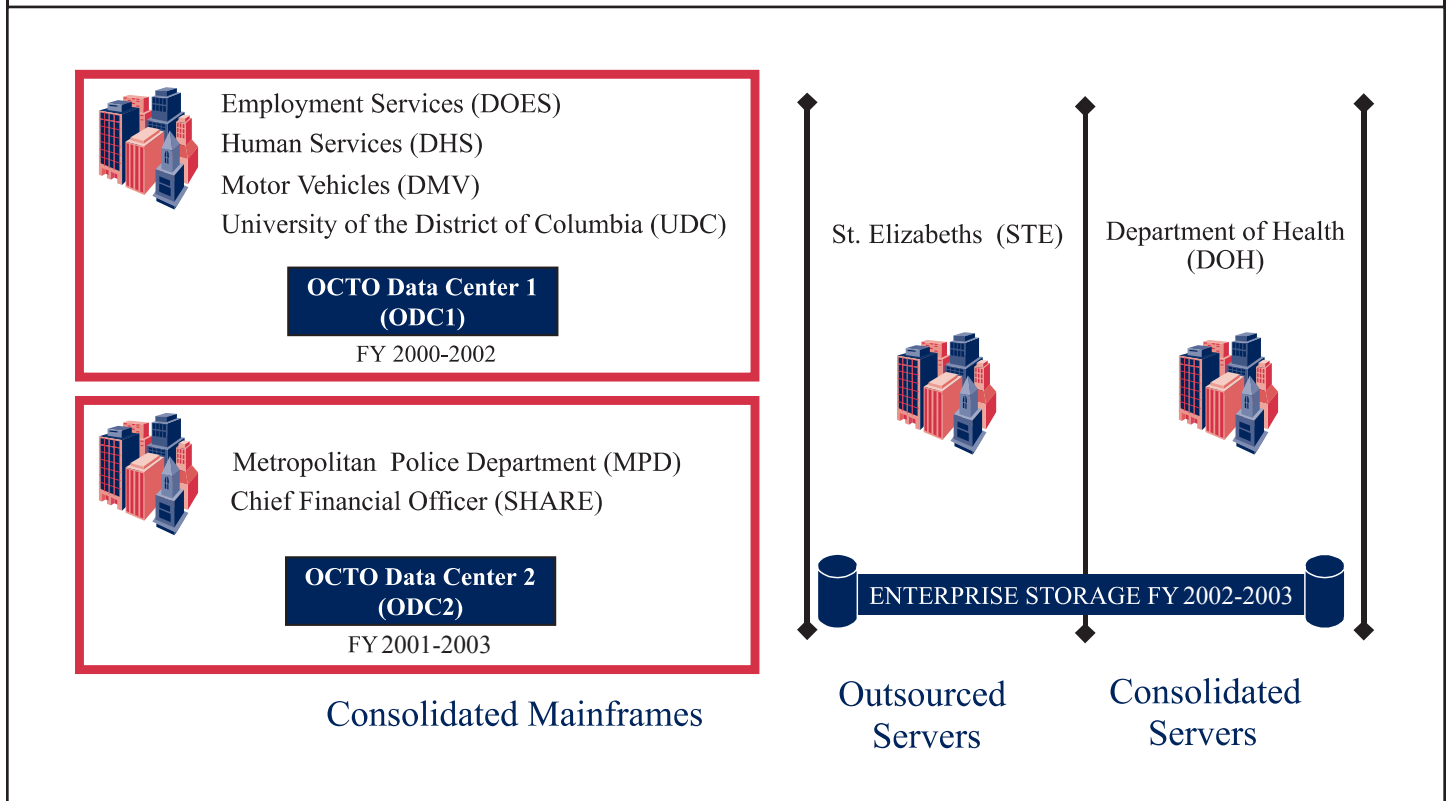   - upgrade
    - document

Consolidate Data Centers

Before calendar year 2000, the District had eight separate mainframe data centers, with no integrated or coordinated functions. Each data center had its own software, hardware, and operating personnel, creating significant redundancies in resources. Services and support, such as production control, storage management, help desks, and security, were incomplete at some data centers. All data centers lacked process documentation. Overall, the system of eight separate centers cost the city far more than necessary and provided incomplete data processing services at best. To address these problems, OCTO is consolidating the District's data centers in a multi-year program shown in Exhibit 6. The end result will be a single pair of real-time, mirrored mainframe data centers and a citywide client-server environment whose enterprise storage requirements have also been consolidated. For FY 2002-2004, citywide mainframe storage capacity will be in the 3-4-terabyte range.

We're consolidating all existing data centers into two sites, one (ODC1) in Ward 7 and the other (ODC2) in Ward 6. We've chosen a two-center configuration to provide mirrored storage. Each data center will perform real-time copying of the other's data so that each center will house an exact copy of the data originally stored at the other. Through data mirroring, we'll be able to recover critical data quickly in the event of a natural disaster or other major system interruption.

OCTO's first step in moving from eight data centers to two (now completed) was to integrate and upgrade the separate data centers of several agencies that have critical responsibilities and/or especially large databases—the Department of Human Services (DHS), the Department of Employment Services (DOES), the University of the District of Columbia (UDC), the CFO, and OCTO.

During the summer of 2000, we upgraded the DHS data center to provide the hardware, software and personnel necessary for multi-agency functions. In the fall of that year, we transferred the DOES and UDC data center functions to the newly upgraded DHS data center to create the first consolidated data center, OCTO Data Center 1 (ODC1). In October

Exhibit 6: District Data Center Consolidation

Employment Services (DOES)
Human Services (DHS)
Motor Vehicles (DMV)
University of the District of Columbia (UDC)

OCTO Data Center 1 (ODC1)
FY 2000-2002

Metropolitan Police Department (MPD)
Chief Financial Officer (SHARE)

OCTO Data Center 2 (ODC2)
FY 2001-2003

Consolidated Mainframes

St. Elizabeths (STE)

Department of Health (DOH)

ENTERPRISE STORAGE FY 2002-2003

Outsourced Servers

Consolidated Servers

2000, we merged the CFO's SHARE data center with the OCTO data center to create the second OCTO Data Center (ODC2). During the spring and summer of 2001, we incorporated the Department of Motor Vehicles (DMV) data center into OCD1. The data centers now have up-to-date wiring, air conditioning, flooring, ceiling tiles, equipment, and fire protection systems. New workspaces and a new physical security system are under construction.

During FY 2002-2003, we'll incorporate the Metropolitan Police Department's (MPD) data center into ODC2, after conducting a best practices study to identify the best approach for consolidating MPD's highly confidential and time-sensitive data processing operations.

In FY 2002-2003, we'll also consolidate the District's extensive server resources. We'll begin in FY 2002 by evaluating the health of existing mainframe and legacy platforms, focusing on performance, application support, and system management capabilities. We'll also conduct a best practices study to evaluate options for server consolidation, which range from centralizing all servers, to installing shared information platforms.

In addition to data centers and servers, we're consolidating the city's data storage to create enterprise storage, a single foreground physical storage location (both mainframe and client servers), with duplicate background storage in an alternative physical location. We're also consolidating supporting software to create enterprise software, which will provide all agencies high-speed access to this information. Through enterprise storage and software, we'll eliminate redundant and inconsistent data updating and storage, and shift from cumbersome, error-prone paper record-keeping to efficient, secure electronic document management.

The data center program involves more than the physical consolidation of facilities, hardware and software, and data storage. We're also upgrading and documenting data center functions. A top-quality data center provides:

- production control, the efficient scheduling of batch processing and the control of online access to citywide databases;

- configuration management, the definition of all elements of hardware, software and network connectivity;

- problem management, the systematic identification and resolution of problems to avoid system interruptions;

- help desks that provide a centralized, rapid response system for user problems and prevent service interruptions;

- security, rules and technical controls that define access to data elements and sources;

- change management to identify, develop, test and implement all needed modifications in the production environment;

- performance and capacity management to monitor and report on system performance and identify problems for timely resolution;

- storage management to provide efficient and secure disk and tape storage;

- input/output management;

- backup and disaster recovery processes to ensure that systems recover quickly and fully from major outages;

- management reporting functions; and

- procurement of all hardware and software components of the data processing environment.

Before the consolidation program, the District's eight separate data centers performed only some of these functions, and generally without documentation or standardized processes. When the data center program is complete in 2003, the District's new consolidated data centers will provide the full range of data center functions in a controlled and systematic manner, and there will be formal, documented policies and procedures for all these functions.

The District will realize the following dramatic functional and financial returns on our investment in data center consolidation:

- automated functions that reduce human intervention, errors and rework;

- faster implementation of new technologies as a result of integrated and stable platforms;

- greater mainframe system availability, reliability and serviceability;

- documented, standard business processes that permit city employees to understand system capabilities and services easily, and thus improve individual productivity;

- reports that allow management to identify methods for improving services, reducing risks and cutting costs;

- multiple information sources that foster more informed and effective management decisions;

- greater stability and consistency in daily operations;

- greater IT personnel efficiency, because we'll manage complex IT functions with fewer high-paid personnel;

- better protection of data integrity;

- cost savings of $1-2 million per year ($745,000 to date) through operational efficiencies and volume discounts from hardware and software vendors; and

- the foundation for connecting the District's legacy systems and data with the Internet.

Implement Unified Communications Programs

- Build Unified Communications Center (UCC)
    - 24-hour call center
    - 911, 311, 727-1000 calls
    - network operations center, help desk
- Implement Public Safety Communications Center (PSCC)
    - interim 911, 311, 727-1000 call center (current)
    - UCC backup (planned)
- Implement Telephone Integration Planning Program (TIPP) for telephony tracking/control
- Build out Wide Area Network (WAN), the institutional network (I-NET) for DC

Unified Communications Programs

OCTO's unified communications initiatives, pictured in Exhibit 7, are a series of programs designed to improve public safety, service delivery, and access to information throughout the city.

The *Unified Communications Center* program is the core of the unified communications programs. The UCC consolidates several citywide communications and data processing operations at a new 15,000-square-foot facility on the unoccupied east campus of St. Elizabeths Hospital in Ward 8.
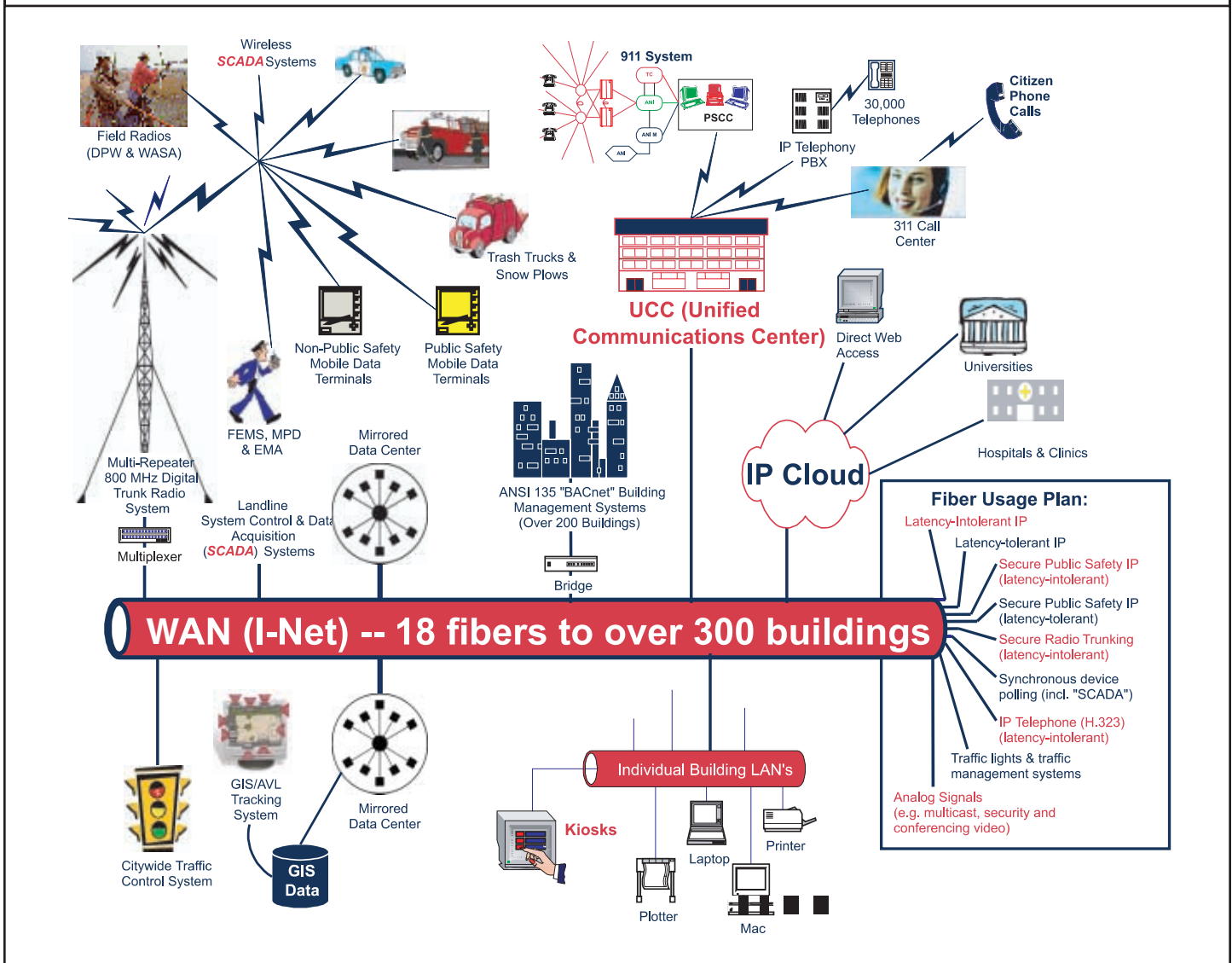
The centerpiece of the UCC is a 24-hour call center for 911 (emergency), 311 (non-emergency public safety), and 727-1000 (non-emergency service request) calls. Cross-trained call-takers and dispatchers will respond to all citywide emergency and non-emergency calls using state-of-the-art programming and communications systems specifically designed for these functions. Call center systems will track all public safety emergency and non-emergency calls, as well as all customer service requests. These systems will also report on call center performance and coordinate reporting of traffic control and other citywide communications services and systems.

The UCC will also house the District's primary network operations center (NOC), now at the Wilson building, and the help desk that assists city employees with network problems.

The UCC operations center will house a full complement of support functions, including network assessment, data integrity analysis, and hardware maintenance and repair.

The *Public Safety Communications Center (PSCC)* project consolidated the MPD and Fire and Emergency Medical Services (FEMS) call centers into the PSCC, a 225-employee facility located in Ward 4. The PSCC now serves as the MPD/FEMS 911 communications center, and will become the non-emergency and public safety call center during construction of the UCC. Once the UCC is complete, the PSCC will serve as the UCC's backup communications facility. The PSCC provides unified call taking and dispatch functions as well as operational consolidation and related change management capabilities. It has significantly reduced call response times and improved citywide emergency services, saving an estimated $2.8 million in potential legal liability costs.

Exhibit 7: Unified Communications Programs

911 System

PSCC

UCC (Unified Communications Center)

IP Telephony PBX

30,000 Telephones

Citizen Phone Calls

311 Call Center

Wireless *SCADA* Systems

Field Radios (DPW & WASA)

Trash Trucks & Snow Plows

Direct Web Access

Universities

Non-Public Safety Mobile Data Terminals

Public Safety Mobile Data Terminals

Hospitals & Clinics

FEMS, MPD & EMA

Mirrored Data Center

IP Cloud

Multi-Repeater 800 MHz Digital Trunk Radio System

Landline System Control & Data Acquisition (*SCADA*) Systems

ANSI 135 "BACnet" Building Management Systems (Over 200 Buildings)

Multiplexer

Bridge

Fiber Usage Plan:
Latency-Intolerant IP
Latency-tolerant IP
Secure Public Safety IP (latency-intolerant)
Secure Public Safety IP (latency-tolerant)
Secure Radio Trunking (latency-intolerant)
Synchronous device polling (incl. "SCADA")
IP Telephone (H.323) (latency-intolerant)
Traffic lights & traffic management systems
Analog Signals (e.g. multicast, security and conferencing video)

WAN (I-Net) -- 18 fibers to over 300 buildings

GIS/AVL Tracking System

Mirrored Data Center

Individual Building LAN's

Kiosks

Laptop

Printer

Citywide Traffic Control System

GIS Data

Plotter

Mac

Two other support projects within the unified communications programs are the *Telephone Integration Planning Project (TIPP)* and the *Supervisory Control and Data Acquisition System (SCADA)*.

TIPP creates a unified database and management tools for tracking and control of District IT and telecommunications assets, such as central processing units (CPUs), monitors, laptops, palm pilots, pagers, cell phones, phone jacks, phone handsets, and circuits. The TIPP is also developing systems to verify and audit charges on the District's local telephone service bills.

SCADA is a data collection and analysis system for monitoring and controlling District equipment using the telecommunications network. For example, SCADA can be used with landline and wireless systems to gather real-time data from meters and alarms incorporated in District building heating,

ventilation and air conditioning systems (HVAC), electric meters, pumps, and security systems. SCADA alerts the network operations center that a problem has occurred, performs problem analysis (e.g., evaluating the severity of the malfunction), and displays the analysis in a logical format for quick and effective problem resolution.

The UCC program promises a substantial financial and non-financial return on our investment. The program will:

- improve residents' access to citywide emergency and non-emergency services;

- coordinate citywide service standards and processes;

- increase accountability for timely delivery of services through new management and organization structures;

- dramatically reduce the number of call-takers needed to

respond to resident requests, achieving substantial cost savings;

- realize additional savings by taking advantage of system operational and lifecycle efficiencies;

- contribute to economic development and community revitalization in Ward 8; and

- serve as a visible symbol of the District's transformation from "worst to first" in telephony and resident emergency and non-emergency customer service.

Our target date for completion of the unified communications programs is late FY 2003

Upgrade Wide Area Network

- Expand WAN to all District agencies
- Centralize citywide WAN at the Wilson Building network operations center (NOC)
    - rapid response for outages
    - full support services to optimize performance
    - NOC backup at ODC2 data center
- Re-engineer WAN for multimedia applications
- Enhance WAN security
- Set up citywide help desk at the NOC

Upgraded DC Wide Area Network (WAN)

To support the UCC and all District telecommunications functions, we're implementing an integrated citywide fiber-optic network known as the District's institutional network, or I-NET. The *Wide Area Network (WAN)* program manages the design, engineering, construction and implementation of this network. We'll acquire network components through cable franchise agreements and other sources and then configure them for District-specific needs, replacing leased telephone lines with District-owned equipment. The citywide fiber-optic network will span the entire city, connecting all significant District government buildings, computing resources, and mobile units in a seamless system effectively owned by the District itself. The network will incorporate both landline communications systems, including telephony and computer communications networks, and wireless systems, including radio systems, mobile data terminals (MDTs), personal digital assistants (PDAs), automatic vehicle locators, and global positioning systems (GPS). Other important systems on the citywide fiber optic network are the traffic management system, which controls traffic lights and cameras mounted at intersections, and coordinated building automation control (BAC) systems for central management of citywide building energy, utilities, and security.

The project will also position the District to implement emerging technologies that benefit both government and private entities, such as mobile telemedicine in District and private ambulances. In addition, the WAN project will yield significant cost savings by cutting telephone message unit costs by up to $5 million per year, eliminating up to $3 million per year in costs for leased telephone lines, and saving up to

$600,000 per year through energy efficiencies.

To support centralized WAN management, we've established a new centralized network operations center (NOC) in the Wilson building, the recently renovated home of the District government. We've also installed a backup NOC at the ODC2 data center. The NOC provides a complete array of services to optimize WAN performance. These functions include:

- requirements assessment, the analysis of network size, topology, technology, and quality levels to ensure rapid service deployment;

- implementation of industry-accepted best practice network management by a team of specialists in network management;

- a problem resolution system that uses a dedicated phone number to provide a single point of contact for all network service problems and allows us to log and track all calls to resolution in a state-of-the-art trouble ticket system;

- round-the-clock network monitoring to enhance performance availability;

- configuration management capabilities that gather information about the current network environment, use the data to modify the configuration as needed, process change requests, and maintain a configuration inventory of all monitored network components; and

- comprehensive management reports and meetings to facilitate network performance evaluation and planning for future changes.

Two other major WAN projects involve re-designing the WAN architecture and re-engineering WAN servers to provide greater operational efficiencies and to support evolving multimedia applications, such as voice over IP and video conferencing. We're also strengthening the WAN security system and adding advanced security features to protect the WAN from unauthorized internal or external use.

Finally, we're setting up a citywide help desk at the NOC to give all District employees immediate assistance with problems they encounter in using the WAN. The help desk will identify the nature of the problem, then route it to a source of specific relevant expertise for speedy and effective resolution.

Upgrade Wireless Communications

- Expand and standardize mobile data terminals (MDTs)
- Consolidate agency wireless technologies and infrastructure
- Enhance wireless availability, reliability, maintainability
- Create 5-year plan for District wireless
    - public safety infrastructure
    - MDTs
    - telephony (mobile, landline)
    - automatic vehicle locators
    - paging

IT Transformation Goals and Programs

Wireless Communications

Currently, the District's public safety and non-public safety wireless systems are fragmented, inefficient, and unnecessarily expensive. The *Wireless Communications* program centralizes wireless management, revamps wireless systems, and charts a wireless technology pathway for the future.

A key wireless project helps the District to expand use of mobile data terminals (MDTs). MDTs speed services and improve record-keeping accuracy by allowing police and service workers to communicate with operations centers and complete paperwork at the originating service site. We're consolidating procurements of hardware, maintenance, training and spare parts for MDTs used by the MPD, the DPW, the Fire Department, and other agencies to achieve substantial volume discounts.

We're also consolidating compatible wireless technologies and infrastructure across multiple agencies, cutting wireless costs, and eliminating several unsightly, high-maintenance repeater towers. We're enhancing the availability, reliability and maintainability of the city's wireless systems. Finally, we're developing a detailed five-year wireless plan that considers the District's public safety infrastructure, MDTs, automatic vehicle locators, telephony, and paging. By centralizing our approach to wireless, we'll realize a significant return on our wireless investment through efficiencies in procurement, engineering, operations, and planning.

Manage Telecommunications

- Review agency phone charges through web-based TelWatch@dc.gov
- Cut phone bill by one-third with a 3-year dial tone contract
- Standardize and cut cost of cell phone contract services
- Upgrade handsets and standardize telephony services
- Update DC government phone directory annually

Telecommunications Program

OCTO's telecommunications division provides oversight and direction for all District government telecommunications projects. Our oversight responsibilities include identifying emerging technologies to improve District functions, streamlining IT infrastructure and telephony, supporting telecommunications services with knowledge-based applications such as TelWatch@dc.gov (see below), and providing specialized telecommunications expertise to facilitate agency initiatives. We've launched the following major telecommunications projects:

- the *TelWatch@dc.gov* project, which creates a web-based tool to give agencies consolidated, line-by-line information about their local, long distance, voice mail, cell, PDA and wireless telephony charges;

- the *District Dial Tone* project, which renegotiated the District's contract with the local telephone company and cuts our annual telephone bill by over a third, from $34 million to $22 million, for each of the next 3 years;

- the *Unified Cell* project, which standardized cell phone service across the District government and leverages the resulting contract to realize cost savings of over $2.2 million to date;

- the *Handset Upgrade* project, which standardizes and upgrades the District's 30,000 phones on ISDN Centrex technology, paving the way for continuing cost savings; and

- annual updates that keep the District's government phone directory current.

Re-engineer Business Processes

- Coordinate/track customer services for all agencies
- Develop operations processes for city call center
- Enhance abandoned vehicle services and revenues for DPW
- Reduce tree/landscape backlog for DPW
- Improve citywide towing for DPW
- Consolidate 311 calls for MPD
- Create case tracking system for OCME
- Create social service information/referral center for DHS
- Improve service, eliminate budget deficit for FOMA

Business Process Re-engineering (BPR)

Business process re-engineering (BPR), as the name implies, develops new business processes that combine technology, people, and procedures to improve performance. OCTO's BPR program encompasses eight projects for one or multiple agencies and one citywide project.

The customer service architecture project is improving business processes for all agencies by developing automated tools to refine, coordinate, and monitor agency workloads, scheduling and service delivery. The Unified Communications Center (UCC) BPR project supports the city's UCC by developing the operational processes needed to deliver efficient call-taking services citywide.

A series of projects are helping the Department of Public Works (DPW) provide faster and more effective non-emergency 311 services. A project for the DPW's Abandoned and Junk Vehicle Division will help the DPW remove abandoned and junk vehicles faster and use unclaimed vehicle auctions more effectively to fund removal services. Another DPW project assists the Tree and Landscape Division in trimming a substantial backlog of empty tree boxes and tree removal requests. A third project helps DPW improve vehicle-towing services throughout the city.

In the MPD project, we're consolidating the MPD's 311 system to provide faster and better non-emergency police responses.

For the Office of the Chief Medical Examiner (OCME), we're implementing SKELTRAK, the OCME's first information management and case tracking system. SKELTRAK replaces an antiquated manual record-keeping system that prevented the OCME from performing

meaningful data collection, case tracking, and quality assurance. The new system is the cornerstone of OCME's ongoing management improvement efforts, designed to better identify decedents, complete death certificates, inform family members, settle insurance claims, and avoid liability for delays in these functions.

OCTO worked with the Department of Human Services (DHS) to develop *Answers, Please!,* a comprehensive information and referral center that directs residents and visitors to social services offered by government and community providers. The project designed business processes, identified technology, prepared the physical facility, and trained call takers to staff the new social services center.

The Facilities Operations and Maintenance Administration (FOMA) project is a collaborative effort between OCTO and the Office of Operational Improvements in the City Administrator's office. OCTO designed new business processes and re-aligned manpower resources with FOMA workloads. The FOMA project eliminated a substantial FOMA budget deficit, saved the District $3 million annually in salary and benefits costs, and helped FOMA deliver better, faster facilities services for the city.

Implement Email/Web Infrastructure

- Implement citywide email
- Implement email security
    - WAN security procedures and controls
    - WAN/server intrusion detection and protection
- Implement Domain Name Services
- Develop web infrastructure production systems
- Create Web Development Kit for agency use
- Implement Web Academy web development course

Email/Web Infrastructure Implementation

The projects in the *email/web infrastructure implementation* program are designed to help city employees correspond with each other more effectively, and to lay the groundwork for web-based service applications. The projects include:

- replacing incompatible agency email systems with a single citywide email system, eliminating 40 redundant servers in the process;

- implementing citywide security procedures and controls to protect the District WAN from unauthorized use;

- installing an intrusion detection and protection system for the WAN and critical servers that will respond automatically to virus attacks and other intrusions;

- implementing and maintaining new Domain Name Services to facilitate interconnection between the District's private WAN and the public Internet;

- developing infrastructure production systems for the District web portal and agency websites;

- creating the Web Development Kit, a set of templates and technical standards to help agencies design their own websites and applications; and

- initiating a Web Academy training course to teach the use of the Web Development Kit.

Implement Seat Management

- Outsource workstation (seat) procurement/management
    - hardware
    - operating system software
    - off-the-shelf application suites
- Centralize workstation installation, training and maintenance
- Establish high performance/reliability standards
- Refresh workstations on a 3-year cycle

Seat Management

Seat management consolidates management of all elements of the PC workstation, or seat, creating one-stop shopping that affords cost savings and frees workstation users to concentrate on their primary jobs.

In the District, we'll implement seat management by centralizing management of procurement, installation, training, maintenance, repair and refresh for the city's desktop hardware, operating system software and commercial off-the-shelf (COTS) PC application suites. Each workstation will be built to high performance and reliability standards and will be expandable to meet changing agency needs. Workstations will generally be refreshed on a three-year cycle to take advantage of emerging PC innovations.

The seat management program will produce a substantial return on the District's investment. We'll realize significant cost savings through volume discounts and centralized purchasing, installation, training, support, maintenance and repairs. Most importantly, seat management will free agency employees to focus on core IT and resident service projects, rather than commodity workstation administrative support.

Build GIS Infrastructure

- Develop centralized citywide GIS infrastructure
- Create over 50+ detailed maps linked to a database (DC Atlas)
- Support mapping for
    - MPD   - DHS
    - DCRA   - Office of Planning
    - DPW   - Office of Zoning
    - FEMS   - Federal agencies

GIS Infrastructure

In the *GIS infrastructure* program, a regional consortium, including the regional Council of Governments and the federal government, is developing a coordinated GIS system to support mission-critical mapping for numerous District and federal agencies, including the MPD, DPW, DCRA, FEMS,

DHS, Office of Planning, and Office of Zoning. We've centralized agency software license acquisition and developed a centralized network-based GIS infrastructure. The GIS infrastructure consists of data, hardware, software, network connectivity and personnel that work together to assemble, store, manipulate and display geographically referenced information. At its core is the DC Atlas, a set of more than 50 layered digital maps, linked to a database, that displays a wide variety of geographical details. The detailed layers in the Atlas include: voting precincts; business improvement districts; DC ward boundaries; hospitals and medical clinics; parks; fire stations; police stations; police districts; libraries; census tracts; historical districts; zip codes; Metro stations; public schools; charter schools; real property squares; building structure lines; power stations; overhead traffic signs; utility poles; bodies of water; street center lines; wooded areas; wheelchair ramps; guardrails and barriers. The Atlas is now available to District agencies through the DC WAN and will be available in summer 2002 to the public through the Internet.

Together, the DC Atlas and other GIS map products will permit OCTO and agencies to develop virtually countless applications to speed and improve services for residents, businesses, and visitors. Potential map applications will help agencies route emergency services, examine crime trends, conduct citywide planning, study the incidence of disease outbreaks, direct citizens to the closest public health facility, route road repairs and trash pickups, and maintain streets, bridges, traffic control systems, and trees. We expect the GIS infrastructure program to yield a significant return on our investment through inter-agency cost sharing and faster, more effective services citywide. As of late 2001, the program has already saved $1.2 million through the consolidation of software licenses alone.

Establish Data Warehousing

- Support *Safe Passages* children's information system
- Build JUSTIS to integrate data from 10 agencies
- Create data warehouses for DOES, DMV, DOH

Data Warehousing

OCTO's *Data Warehousing* program includes several projects that enhance interagency data sharing, create new uses for existing databases, and incorporate web-based browser techniques to simplify and maximize user access.

We're developing data warehouse systems to enhance many single-agency and multi-agency functions. For example, the *Safe Passages* information system will use data warehouse capabilities to integrate child-related data from multiple agencies, helping these agencies coordinate their activities to improve services for our children. The JUSTIS data warehouse system provides integrated data access across 10 federal and District law enforcement and public safety agencies, permitting these agencies to work together as a unified system. Within the Department of Employment Services (DOES), the DMV, and

the DOH, we'll import data from multiple programs into agency-specific data warehouses that facilitate coordinated, comprehensive resident services.

Support MPD Data Networking

- Upgrade network
- Upgrade cabling
- Install mobile data computers

MPD Data Networking

OCTO has launched several related infrastructure projects for the MPD. We're upgrading the MPD's networks and cabling to improve communications among police officers, between officers and operations centers, and between officers and the MPD itself. We're also helping the MPD install mobile data computers in most squad cars.

These mobile computers improve police efficiency and effectiveness by allowing officers to perform vehicle and criminal records checks, communicate with operations centers, complete paperwork, and chat with each other to coordinate arrests and crime investigations while on the road.

Assist EOM Outreach

- Identify new IT uses for the District
- Identify ways to attract high-tech companies
- Support Mayor as Chair of USCOM E-government Committee

Executive Office of the Mayor Outreach

In the *EOM Outreach* program, OCTO serves as a central technology resource for the Mayor and District Council. We're helping the Mayor and Council identify innovative uses of technology for the District. We're helping design IT incentives and collateral materials to persuade technology companies to open offices here. We're also supporting the Mayor in his role as Chair of the US Council of Mayors Electronic Government Committee, which explores new uses of technology to deliver city services and improve municipal operations.

Build E-government Infrastructure

- Build foundation for agency websites
    - portal design standards
    - web incubator (agency website building tools)
- Create web application systems (agency web toolkits)
- Develop action engines
    - payment
    - authentication
    - personalization
- Implement *Clean Hands* system
- Enhance security
- Ensure ADA compliance
- Develop web performance EIS to track website usage

E-government Infrastructure

OCTO's *E-government Infrastructure* program lays the foundation for e-government citywide applications—the comprehensive web portal, www.dc.gov, that gives residents, businesses and visitors an Internet gateway to online services of the District government. The web portal is up and running, providing extensive information about agencies, the District Council, the Mayor's office and city services. Our current infrastructure projects, described below, are enhancing the portal's graphics and navigation features, creating action engines to support new functions, adding security protections, and making the site more accessible for persons with disabilities.

> *"When you use our web portal to do business with the city, it doesn't matter what ward you're in. You can be anywhere and go anywhere you want."*
>
> *Phil Mendelson*
> *Councilmember at Large*
> *District of Columbia*

Our first three e-government infrastructure projects—portal design standards, the web incubator, and web application systems—enable agencies to create their own websites and web-based service applications, linked to the DC web portal by a common web architecture. The design standards ensure that all agency web pages have a common color scheme and visual layout based on the District's home page, as well as navigation aids (e.g. Home or Contact Us) that have the same names and appear in the same locations on every page. As a result, visitors to the DC home page and linked agency websites quickly learn the common web page structure and find newly added agency web pages familiar and easy to use. The web incubator is a set of tools and services to guide and assist agencies in building their own websites. Web application systems are toolkits agencies use to develop agency-specific web-based service applications and install them on their websites.

The next four applications—action engines, *Clean Hands*, enhanced security, and Americans with Disabilities Act (ADA) compliance—support all agency websites and the DC web portal by adding functionality, tightening protections against unauthorized use, and expanding access for the disabled.

The action engines and *Clean Hands* are background systems that allow agencies to add certain functions to their websites. The payment action engine permits agencies to offer online credit card and debit card payment options in a secure environment. The authentication action engine enables agencies to assign and recognize user personal identification numbers (PINs) for certain services. The personalization action engine will allow agencies to tailor certain information updates and service assistance to individual users based on their PINs. The *Clean Hands* project uses integrated databases to prevent individuals or businesses who are violating District law or regulations (e.g. delinquent taxpayers or landlords who fail to maintain buildings to code) from obtaining business licenses and other District privileges online.

Our security project is adding new features necessary to protect our systems and data from intrusion and misuse in an electronic service environment. These features include: VPN (virtual private network) security systems, which use encryption and other techniques to permit users to access District resources securely across a network; digital signatures, which use encryption to identify the sender of an electronic message with a non-forgeable code; and digital certificates, which verify the identity and authority of each party to an Internet transaction.

Our Americans with Disabilities Act compliance project is designed to meet the ADA's requirement that state and local governments make their websites and electronic services accessible to the disabled. We've established a 13-point web design program to provide handicapped access. This program requires OCTO and agency website designers to:

- provide a text equivalent for every non-text element on a page;

- supply a detailed description of photographs that contribute to the content of the page via an associated link, and include a Return on the description page that will take the visitor back to the originating page;

- avoid simple words such as "this," "here," or "click" alone for links and use descriptive words instead;

- design web pages so that color is not used to convey information;

- use row and column headers for all data tables;

- have title frames (if used) with text that facilitates identification and navigation;

- ensure that moving, blinking, scrolling or auto-updating options or pages can be paused or stopped;

- ensure that the site can be navigated by a variety of devices, especially a keyboard instead of a mouse;

- use functional text that can be read by assistive technology to display pertinent content when pages use a scripting language;

- provide a second version in ASCII or HTML, or offer visitors a means to request a copy of the document suitable for their needs or obtain assistance in completing forms if documents are posted in PDF format;

- ensure that colors have sufficient contrast so that colorblind users can see them;

- avoid the use of textured backgrounds and text overlaying graphics, which can prevent visually impaired visitors from seeing the text; and

- avoid specific text font sizes; instead, develop pages with dynamic fonts that allow the user to change the size from the browser.

Finally, the web performance information system helps maintain high performance for the entire web portal. The system enables the District to track current usage of the citywide website and forecast its future performance and capacity requirements. This information is essential to keep the site functioning correctly and will be especially critical when residents routinely use the District's web portal to do business with District agencies.

With the e-government infrastructure in place, we'll work during 2002-2004 to maximize electronic services through the e-government applications described in the next section. E-government promises a dramatic return on investment in the form of better services for residents and cost savings for the District government. Residents will be able to do business with District agencies anytime, anywhere, without waiting in traffic, waiting in line, or lining up a babysitter. Business users will do business with the District from the convenience of their offices. Every time a resident or business completes a transaction online instead of visiting an agency in person, the District advances its poitential to save personnel and facilities costs.

Build Enabling IT Infrastructure
Capital Spending Summary

Program	FY 2002 ($000's)
Unified Communications Center (UCC+TIPP)	$30,762
DC Wide Area Network	$21,778
Data Center/Server Consolidation and Data Warehousing	$14,572
E-government/Security Infrastructure	$13,918
Email/Web Infrastructure Implementation	$9,023
Wireless Communications	$7,487
Geographic Information System	$5,776
Telecommunications	$3,225
Seat Management	$2,419
Business Process Re-engineering	$2,283
EOM Outreach	OS*
MPD Data Networking	LP**
Total	*$111,243*

* Operational Spending
** Liaison Project

Goal: Implement Citywide Applications

Applications are the technology-based systems and processes that enable agencies to coordinate operations and deliver services to residents. Some of the applications we're developing are designed for one agency, others for several. All have citywide impact because they require cross-agency data sharing or deliver cross-agency benefits.

We're developing these applications with web-based technologies. Our web-based building blocks make new applications easy for city employees to use and assure that these applications reach the greatest number of users at the lowest cost. Most important, web-based applications maximize the number of

services agencies can deliver electronically, so that residents can access city services online, rather than in line.

Our multi-agency and agency-specific applications are discussed below. A concluding table summarizes planned capital spending for these programs.

Implement Multi-Agency Applications

- Build enterprise resource planning (ERP) systems
    - finance
    - human resources
    - procurement
    - payroll
    - property management
    - performance budgeting
- Develop *Safe Passages* systems to improve and track children's services
- Create GIS applications
- Implement case/workflow systems to track and share case data across agencies
- Create data marts to reorganize data for decision-making

Multi-Agency Applications

OCTO's most important FY 2002-2004 multi-agency project is building a citywide *enterprise resource planning system (ERP)* to serve all city agencies.

ERP systems, developed in the 1990s by Fortune 100 firms, integrate core, enterprise-wide administrative functions to leverage resources, streamline operations, and cut costs. The District's multi-year ERP project integrates finance, human resources (HR), procurement, payroll, property management and performance budgeting functions across all agencies. We expect a substantial return on the District's investment in ERP. In HR, we'll see faster hiring, lower costs, more accurate employee information, and broader, more flexible HR capabilities. In purchasing, we'll benefit from faster procurements, lower per-transaction costs, and far fewer errors. In payroll, we'll profit from more reliable payroll information, more efficient work distribution, and lower payroll transaction costs. In property management, we'll be able to initiate maintenance work orders within 24 hours, speed the completion of real estate renovations and capital improvements, cut costs by reducing the frequency of mid-course changes in real estate projects, and increase our overall capital project completion rate.

Another critical multi-agency project is *Safe Passages*—a number of related projects to coordinate and improve services for our children.

One *Safe Passages* project will integrate MPD and Department of Child and Family Services (DCFS) data on child abuse so that these agencies can better monitor and protect our most vulnerable children. We expect to complete system development in the third quarter of FY 2002. Another *Safe Passages* project will help develop

wraparound social services for nine transforming schools to provide the nutrition, family support and other assistance many students need in order to concentrate on learning. To ensure that wraparound services are effective, the DC Public Schools and other agencies must be able to gather information and coordinate it in a common data system. OCTO is developing this system. We'll identify requirements for the system during the first quarter of FY 2002 and complete system development in the fourth quarter.

Finally, we're developing the Safe Passages Information System, a citywide system that tracks and coordinates child and family services across multiple agencies. Currently, OCTO and agencies are working to resolve HIPAA-related confidentiality issues by obtaining parental consents for the release of essential child data. We expect to begin obtaining necessary consents in the first quarter of FY 2002 and to expand the consent initiative throughout FY 2002. We'll proceed with system development as we receive necessary data through the consent process. Our target date for completion of the Safe Passages Information System is late 2004. Upon completion, the system will allow caseworkers to query case information about children and youth on a daily basis so that they can design and refine service plans and improve case management. The system will also support longer-range strategic decisions and planning. Managers will be able to view consolidated data and information summaries to increase the efficiency of resource allocations and better evaluate and refine service delivery for the District's children.

Another major multi-agency project is the GIS applications project, which builds on the GIS infrastructure program to develop mapping capabilities for numerous District and federal agencies pursuant to a multi-agency, District/Federal memorandum of understanding. These mapping applications draw from the DC Atlas, a layered set of over 50 digital maps, now available to all District agencies on the DC WAN, that together display ward, census, police, business district and other boundaries, as well as police and fire stations, libraries, schools, public health facilities, fire hydrants, traffic lights, landscape features, and other details. Ultimately, the GIS project will use the Atlas to create specific mapping applications for virtually all government business operations, and will make GIS technology available to key federal agencies and private-sector institutions such as hospitals and universities. The GIS application products we've completed to date include:

- the DC Property Map, which locates all properties in the District by a digital point in the center of each lot and will allow District agencies to attach their data to the property map for uses such as tax assessment and collection;

- the Zoning Map, which locates the boundaries of all land use zones and provides information about permitted development in each, for purposes of planning and economic development;

- the Street Centerline Map, which links property addresses to specific blocks to facilitate automated routing of emergency, police, trash pickup and snow removal vehicles;

- the District-owned Property Map, which displays the location of all buildings owned and leased by the District government, with information to facilitate management and maintenance of these properties;

- the Planimetric Map, a digital drawing of features visible from aerial orthophotography such as streets, sidewalks, alleys, buildings, open space, and utilities, for use in street and alley maintenance and traffic management; and

- the Vector Property Map, which identifies the boundaries of every parcel of land in the District to improve zoning, the issuance of building permits, and economic development.

As we continue to develop GIS mapping applications for the District, we'll realize significant quantitative and qualitative returns on our GIS investment—quantitative returns from increased productivity, and qualitative returns through faster and more accurate public safety deployments and non-public safety services.

Other multi-agency applications create flexible platforms that can support a variety of business functions and can be customized by individual users to meet unique requirements. Case/workflow (e-document) management and data marts are two examples. Case/workflow systems help agencies including DOH, DCRA, DOES, DPW, MPD and others track, share and combine case data with each other and with federal agencies. Case/workflow also automates document storage and retrieval, saving storage space and greatly reducing the risk of document loss. Data marts collect and combine information from multiple IT systems and organize it in new ways that enhance reporting and analysis. Data marts will offer DCRA, DCPS, the Office of Planning, and other agencies new tools for decision-making and performance improvement. The DCRA data mart will provide a more complete picture of service trends and needs, for example, by linking individual professional licenses, business licenses, property information, and permits. The DCPS data mart will allow the school system to better track program performance and identify services that students need from other agencies. The Office of Planning data mart will permit the office to use data from multiple sources to better design and evaluate economic development initiatives.

Agency-Specific Applications

Agency-specific applications, by definition, are designed for use by only one agency. Major applications OCTO is developing for District agencies include a next-generation motor vehicle system for the DMV, a suite of related applications for the DOH, and several single-function applications for other agencies.

Move to Next-Generation MVIS

- Replace legacy system with turnkey system
- Create one-stop shopping window for DMV services
- Develop best-in-class DMV website

The next-generation *motor vehicle information system (MVIS)* program replaces the District's outdated legacy MVIS with a new, turnkey system to speed and streamline DMV customer service. The new MVIS is an integrated back office system that allows each employee at a DMV customer service window to process any and all DMV transactions from that single one-stop shopping window. When the system is fully installed, DMV customers will have one-stop shopping for drivers' licenses, license renewals, tag renewals, temporary parking permits, residential parking permits, ticket and fee payments, changes of address, fee refunds, non-drivers' ID cards, handicap placards, and nearly all other DMV services. The days of wandering from window to window and room to room at the DMV office will be over. Simultaneously, the DMV portal element of the MVIS project is building and refining a best-in-class website that now provides all DMV information online and will eventually serve as the entry point for electronic DMV services. Soon, as our related *DMV online* project brings most DMV services to the Internet, DMV one-stop shopping will be available electronically.

Other agency-specific applications deliver new mission-critical capabilities for several individual agencies.

Develop DOH Systems

- Replace vital records system
- Enhance children's immunization registry
- Upgrade HIV/AIDS metro case system
- Upgrade/replace databases for Medicaid interface
- Integrate environmental health and GIS data

For the *Department of Health (DOH),* OCTO is partnering to develop a group of related applications. These projects include:

- re-engineering and replacing the vital records system to add modules for marriage and divorce data, to tighten protections against fraud and abuse, and to speed services to 100,000 customers per year;

- enhancing the District's preventive health immunization registry to support full and timely immunization for all our children;

- upgrading the HIV and AIDS Metro Care system to provide secure, data-encrypted reporting for HIV/AIDS service providers throughout the region;

- updating and replacing DOH databases to support a planned Medicaid data warehouse; and

- creating an environmental health GIS to provide infor-

mation about District air, water and soil quality online and in the formats required by the US Environmental Protection Agency.

Build Single-Agency Applications

- Create consolidated information system for DHS
- Improve business processes for MRDDA
- Create an integrated revenue system for the CFO
- Re-engineer DCRA occupational and professional licensing
- Upgrade facilities management for OPM
- Implement a microwave backup system for EMA
- Create an automated case tracking system for OCC
- Enhance business processes for the State Education Office (SEO)
- Help the Department of Employment Services (DOES) improve their current business processes

Finally, we're partnering to build a variety of single-function applications for individual agencies. These projects will:

- create a consolidated information system to help the *Department of Human Services (DHS)* caseworkers establish service plans for families and seniors and allocate personnel and financial resources efficiently;

- coordinate data and management systems for the Mental Retardation and Developmental Disabilities Administration (*MRDDA)* to provide accurate case information and facilitate service planning for mentally retarded and developmentally disabled residents;

- develop an integrated revenue system for the *Office of the Chief Financial Officer* (OCFO),

- re-engineer the Department of Consumer and Regulatory Affairs' (*DCRA)* occupational and professional licensing processes to improve customer service for 50,000 licensees;

- upgrade the Archibus system to help the *Office of Property Management (OPM)* manage the District's real estate portfolio more efficiently;

- install microwave backup to make the *Emergency Management Agency's (EMA)* radio system more reliable;

- create the first-ever automated legal case management system so that the *Office of Corporation Counsel (OCC)* can track its caseload of 14,000 matters and help boost attorney productivity;

- help the *State Education Office (SEO)* improve business processes and integrate the District of Columbia Tuition Assistance Grant Program (DCTAG) with the Office of Postsecondary Education Research and Assistance (OPERA); and

- consult with the *Department of Employment Services (DOES)* about applications to enhance its current business processes.

Implement Citywide Applications
Capital Spending Summary

Program	FY 2002 ($000's)
DHS	$9,448
Multi-Agency	$7,199
DMV - MVIS	$3,000
OCC	$2,632
DOH	$653
SEO	$596
DOES	$462
DCRA	OS*
OCME	OS*
OCFO	OS*
OPM	OS*
EMA	OS*
Total	*$23,990*

* Operational Spending

Goal: Integrate Citywide Services and Information

The programs within the final expanded capability goal aim to move the District from "worst to first" in technology by implementing a nationally recognized e-government portal and by expanding resident, business and visitor access to technology. These programs are discussed below. A table summarizing planned capital spending on the programs appears at the end of this section.

Implement E-government Applications

- Create resident services wizard (RSW)—needs-based web service access
- Create Business Resource Center (BRC)—a comprehensive business services portal
- Centralize property data for:
    - MPD
    - DCRA
    - FEMS
    - DPW
    - Office of Taxation and Revenue
- Bring DMV office services online
- Create online access to social services *(Answeres, Please!)*
- Pilot electronic benefits transfer (EBT)

E-government Citywide Applications

The projects in the e-government citywide applications program, shown in Exhibit 8, and explained below, are developing web-based applications to bring high-demand city services to the Internet. Representative e-government application projects are detailed below.

The *resident services wizard (RSW)* project creates a new gateway to the District's web portal that will direct residents, businesses, and visitors to the services they need based on service menus,

rather than knowledge about which agency provides the service. With the RSW, a resident or business can get a parking permit without knowing it comes from the DMV, a tax assessment without knowing it comes from the Department of Taxation and Revenue, or make payments for various municipal services without having to know which agency offers the service, and all without leaving home or office.

The RSW also adds new content to the site to help people doing business with or visiting the city. New content will come from sources outside the District government's control via links to their websites. For example, if a potential visitor wants to learn how to tour the city on the Metro system, the RSW's service menu will lead the tourist to the website of the Washington Metropolitan Area Transportation Authority, which is not affiliated with the DC government. However, the District website will not endorse products or services directly by posting links to commercial sites. For example, even though the RSW will offer extensive tourist information, the www.dc.gov site will not point to specific hotel chain web pages.

> *"The District is a city of small businesses. Often, a small business is the embodiment of a lifelong dream. We in government should help business owners follow their dreams. Now we can—by changing a regulatory maze into a simple path and guiding owners through it, all online."*
>
> ***Sharon Ambrose***
> *Councilmember, Ward 6*
> *Chair, Committee on Consumer and Regulatory Affairs*
> *District of Columbia*

The *business resource center (BRC)* uses the same technology as the RSW to expand and simplify access to the District government for business enterprises. Washington is a city of small businesses—90,000 in all—and the major thrust of the BRC is to these enterprises. The DCRA, the District's business licensing and regulatory agency, has committed to helping businesses prosper in the District and has taken a major step by simplifying business licensing. The BRC takes the next step. In the BRC project, DCRA partnered with OCTO to create a needs-based web gateway that guides firms through every process necessary to run a business in the District. Now, without leaving the comfort of home or office, a business owner can go to www.brc.dc.gov and accomplish any of the following:

- find the appropriate business license;
- register the business and its trade name with the District online;
- check the DC Code for municipal regulations;
- file and pay business taxes online;
- develop a business plan using an online primer;

Exhibit 8: Priority Stakeholder E-government Services

Digital Democracy

- Email the Mayor
- Mayor's Scorecard
- Neighborhood Action
- Digital Town Hall and Legislative Process Access
- Electronic Voting

Community Services

- Neighborhood Action Initiatives
- Social Services Life Cycle Management
    - Applications and referrals
- Criminal Justice Information Sharing
- Child Abuse and Neglect Reporting
- Faith-Based Initiatives
- Volunteer Services, Civic Organizations, and Events

Education Services

- Parent/Teacher Communications
- Tutorial Access
- Cable Video Streaming
- Distance Learning
- Education Camps

Business Services

- Business Resource Center
    - Business formation, licenses, trade name registration
    - Tax services, secure online payments
    - Economic development information and funding sources
    - DC Code/municipal regulations/business registry
- Business Services Wizard

Resident Services

- Resident Service Requests and Tracking
- Resident Services Wizard
- Municipal Payments
- Real Property Assessments
- DMV Services
    - Traffic ticket payments
    - Licenses
    - Registration renewals

- find funding either through venture capital, debt financing, small business loans;

- create a marketing strategy;

- select an ownership structure;

- track events necessary to maintain the business in good standing;

- learn about incentives for businesses relocating to the District; and

- learn about District contracting opportunities.

The *eTSC (Electronic Taxpayer Service Center)* allows businesses to conduct DC tax transactions over the Internet using a secure connection. Currently businesses may use the eTSC to file tax returns; pay sales, use, franchise, and employer withholding taxes via credit card or electronic funds transfer; view account balance information; and correspond with the DC Office of Tax and Revenue (OTR). Soon, resident taxpayers will be able to view account balances, file tax returns, pay income and property taxes, and review property sales and assessment values, all online.

The *real property services* project creates a centralized repository for all the real property information collected and used by numerous agencies, including the MPD, OTR, DCRA, the Department of Parks and Recreation, FEMS, and the DPW. While providing multi-agency access, the system also accommodates individual agencies' needs for unique data sets and formats. For example, the MPD uses street addresses, while the OTR identifies real property by plot. Because there is only one system to change, agencies will experience easier updating and dramatic reductions in data errors and system support costs.

> *" DMV online? You know, every hour I don't spend standing in line at the DMV is an hour I can spend with my family. I can't wait."*
>
> ***Christina Fleps***
> *Resident, Ward 4*
> *District of Columbia*

The *DMV online* project brings motor vehicle services to the Internet. When this project is complete, users will be able to conduct most motor vehicle business online, rather than in line. Online services will include all driver and vehicle lifecycle functions, such as obtaining and renewing drivers' licenses, obtaining and renewing vehicle registrations, paying fines for violations, obtaining parking permits and handicapped placards, and others.

We're automating DMV services in two phases. The first phase brings 12 high-demand transactions online:

- issuance of low-number tags by the Mayor's office;

- dealer temporary tag issuance;

- dealer temporary tag inventory monitoring;

- submission of insurance company records;

- vehicle registration renewals;

- viewing of required documents;

- renewal of handicap placards;

- replacement of registration stickers;

- driver's license replacements;

- driver's license renewals;

- entry of traffic school certification; and

- road test sampling and scheduling.

In the second phase, we'll add new services and refine others. Services in this phase include:

- payments for tickets and fees;

- personalized identification number (PIN) assignment and PIN maintenance to support the ticket payment system;

- personalized plate search and purchase;

- static content (DMV laws, guidelines, fees, and transaction information);

- downloadable forms;

- resident-specific information on vehicle characteristics, registration status, and District-approved website links;

- options that allow residents to select permanent hotlinks for future visits to the site; and

- vehicle-specific maintenance tracking screens.

Once all of our DMV applications are in place, vehicle inspection is the only transaction that will need to be done in person. All other regular DMV transactions will be available online, and most residents will never have to visit the DMV office again.

In the *Answers, Please!* project, we're creating online access to another group of high-demand social services. Our *Answers, Please!* BPR initiative helped DHS develop a comprehensive referral center for social services. Our *Answers, Please!* e-government application builds on the BPR project by bringing these social services online. Residents and visitors can go to http://answersplease.dc.gov/main.shtm to access the full range of community-based social services, including:

- a single, easy-to-remember telephone number [(202) INFO 211] for telephone access to social services;

- trained community resource advisors to assist with a variety of needs;

- detailed explanations of eligibility conditions, required documentation, and other prerequisites;

- crisis intervention services and referrals to appropriate mental health professionals for continued support;

- abuse and neglect reporting services;

- referrals for employment, job training and postsecondary education;

- referrals to food subsidy programs, such as the US Department of Agriculture food stamp program;

- information on the DC Healthy Families health insurance program; and

- opportunities for home ownership through the DC home ownership programs.

To support citizens receiving benefits from the District government, the *electronic benefits transfer* pilot (EBT) allows a government agency to deliver benefits to a recipient by electronically crediting the dollar value of the recipient's benefits to a government-provided account or to the recipient's existing account. This will result in a more timely, safe, and secure transfer of funds to recipients than the mails.

Increase Public Service Access

- Implement interactive voice response units
- Make web pages accessible to disabled persons
- Install Internet workstations in public places

Public Service Access

Widespread Internet access is essential to deliver the benefits of e-government to every neighborhood in the District. To create that access, the District must close the gap between those who have Internet access and savvy and those who do not. In the *Public Service Access* program, OCTO and agencies are working to bridge this digital divide.

"We must ensure that every citizen has equal access to every resource. Today, technology is just as vital as any other resource. We have to find ways to extend tech access to every corner of the city."

Frank Wu, Chairman
Human Rights Commission
District of Columbia

We've implemented a 13-point program to make all of our web pages accessible to persons with disabilities. We're also installing public Internet kiosks—complete, secure computer workstations—in easily accessible and secure public buildings, such as DC libraries. The District's public service kiosks will be linked in a network managed

by a centralized kiosk operations center. Each kiosk will offer a menu of selected, high-demand District services and will include several features to ensure that kiosk services are accessible and useful to all residents:

- an LCD touch-screen monitor;

- a printer;

- a credit card reader to permit online payment of fees and fines;

- a document scanner;

- a telephone or microphone; and

- a custom-designed enclosure to provide handicapped access.

We're implementing kiosks in a multi-phased program. Currently, we're conducting a best practices study to learn from other local governments' use of kiosks, to identify those residents who most need kiosk-based services, and to define initial service menus. Likely kiosk services include paying parking tickets and traffic fines, registering for specific program services, paying property and income taxes online, applying for various public benefits, researching the local job market and local job training programs, and obtaining general information about the city and District agencies. In the next phase, we'll create a kiosk prototype center to test and demonstrate kiosk technologies, develop kiosk service applications, and establish the kiosk operations center. Finally, we'll design and construct 10 kiosks for pilot installation at locations around the city. We expect our kiosk network to expand access to city services dramatically by simplifying the use of web-based services and making government services available to all residents without walls, doors or clocks.

Guide McKinley Technology Campus IT Plan

- Develop McKinley Technology Campus (Phase One)
    - leadership by DC Public Schools
    - 800-student facility in Ward 5
    - magnet school for all District students
    - industry internships and job opportunities
- Create Continuing Education Program (Phase Two)
    - community college-level technology education
    - central IT training source
    - support for adults, out-of-school youth, job seekers
- Build out McKinley Technology Campus (Phase Three)
    - sports and recreation center
    - business conference center
    - model auditorium
    - TV and media broadcast complex

McKinley Technology Campus

To spur economic development and provide a nation-class technology education hub for the District, the DC Public Schools (DCPS), the Office of Economic Development, the Office of Planning, and OCTO are working together

to build the McKinley Technology Campus (MTC). The MTC is a multi-phased program located on a 24.5-acre campus in Ward 5 that will provide technology education to residents of all ages and create a technology hub for the District. The three phases of the MTC program are developing a technology high school on the campus, implementing continuing education and distance learning programs, and developing the larger campus around the high school for multiple uses.

Phase One development of the McKinley Technology Campus began in FY 2001, and the school is slated to open its doors in fall 2003. The high school will accommodate 800 students in a state-of-the-art facility and will operate as a magnet school, open to all school-age residents in the city. The high school will offer a unique technology-focused curriculum, supported by industry internships and postsecondary technology job opportunities through public-private partnerships. In addition, the technology high school will link to other schools in the DCPS system to offer technology-learning opportunities for all high school students.

> *"I'm often asked what adults can do for the youth of the city. Of course, we always need love, encouragement, trust, and your faith in us. But to become successful in today's society, we need all the technology skills we can get. And we need you, our teachers, parents, and community to learn along with us."*
>
> **Crystal Williams**
> *Youth Mayor*
> *District of Columbia*

During the initial construction of the high school in FY 2002, we'll launch planning and curriculum development for Phase Two of the MTC, expanding the high school to create the McKinley Continuing Education Program. Using the high school itself, as well as distance learning capabilities linked to the high school, the continuing education program will provide a tech-centric, community college-level curriculum for high school graduates and adults of all ages. The program will also serve as a central IT training source to attract technology employers to the District. The projected start date for the McKinley Continuing Education Program is late 2004.

During the latter part of 2002, we'll launch Phase Three of the MTC, developing the campus around the high school to serve as a technology hub for the city. In addition to the high school and the continuing education center, the campus is planned to house a sports and recreation center, a business conference center cooperative, a model auditorium for arts and industry, and a world-class television and media broadcast complex for the city. We expect to complete the expanded campus in late 2005.

Ultimately, the MTC will provide a technology education magnet with the potential to affect every school and household in the District, a vibrant center for arts and entertainment, and a powerful engine to drive economic development for the District and the region.

Develop Urban Technology Village
• Develop a synergistic community of tech firms • Build on Unified Communications Center • Provide state-of-the-art IT infrastructure • Create a university center • Deploy incentives to attract high-tech firms • Help revitalize Ward 8

Urban Technology Village

A key District economic development goal is attracting technology employers to form the backbone of the District's new economy. Last year, the District enacted the New Economy Transformation Act of 2000, authorizing training, relocation, and tax incentives for high-tech companies that locate in targeted areas of the city. The McKinley Technology Campus is creating an IT education and training hub to attract technology employers. The Urban Technology Village is the District's newest initiative to entice high-tech firms to our city.

As conceptualized, the Urban Technology Village will be a synergistic, co-located community of technology firms, anchored by the 300-employee Unified Communications Center (UCC) on the St. Elizabeths campus in Ward 8. We'll support the village with satellite and wireless communications and by extending our fiber optic network to all village sites.

A university center on the campus, a partnership consortium of local universities, will provide training for UCC employees and community residents, building a local corps of technology employees to serve the firms in the Village and attract others. As conceived, the university center will also offer a variety of internship programs to place university center students in part-time and full-time positions with the UCC and other high-tech employers on the campus.

The District will deploy a variety of incentives to encourage high-tech companies to co-locate around the UCC. The Village's core of high-tech companies will attract satellite service companies offering financial, marketing, accounting, web design, and recruiting expertise. Like business clusters that have sprung up in Van Ness, Georgetown, LeDroit Park, and other DC neighborhoods, these technology-oriented firms will also attract amenities such as shops, gyms, and restaurants. Over time, the loosely-knit, similarly-minded enterprises in the Urban Technology Village can revitalize surrounding neighborhoods and help position the District as a hub of the global Internet economy.

Integrate Citywide Services and Information Capital Spending Summary

Program	FY 2002 ($000's)
[McKinley Technology Campus	$48,600*]
E-government Citywide Applications	$1,734
Public Service Access	$830
Urban Technology Village	OS**
Total	*$2,564*

* DC Public School Budget
** Operational Spending

Plan Implementation

Many of the programs described in this plan are well underway or complete. The Agency Performance Metrics (Exhibit 9) section in the Appendix shows performance to date against specifications for selected high-impact programs. The following discussion measures our overall success in terms of cost savings, productivity gains, and improvements in IT functions and city services.

Cost Savings

As shown in Exhibit 10 in the Appendix, the implementation of IT programs through FY 2001 has yielded $21 million in operations savings (a return of $2.59 on every dollar invested in the operating budget) and $19.3 million in capital savings, primarily through volume discounts, centralized and standardized management oversight, and centralized purchasing. We expect to realize additional savings as future programs come online.

Productivity Improvements

Most of the programs described in this plan yield significant improvements in citywide or single-agency productivity, in addition to direct cost savings. Productivity gains produced by selected major projects are summarized in Exhibit 11 in the Appendix, and are highlighted below.

Our new consolidated IT budgeting process has eliminated cross-agency duplications in IT financial management and resources for mission-critical programs. The new process has also ensured that the District commits funds only to those projects with a very high probability of success. Our centralized IT procurement process has streamlined procurement management and tracking, and as a result, has significantly shortened procurement timelines. Our Adopt an Agency program, in which private-sector firms donate IT management time and expertise to the District, has expanded the District's overall IT management capacity, upgraded IT skills citywide, and accomplished extensive permanent IT knowledge transfer from the private sector to city employees.

In IT infrastructure, consolidation of the city's eight data centers has integrated data storage and retrieval across agencies, dramatically improved data processing quality, reduced the potential for costly errors, and produced substantial economies of scale. Similarly, our telecommunications program has achieved economies by standardizing regular and cell phone services, has cut maintenance expenses, and reduced the frequency of costly outages. The DC WAN program has heightened productivity by improving the reliability and application capacity of our systems. The Public Safety Communications Center has increased the operating efficiency of our now-consolidated public safety call centers, as well as the morale of the more than 200 employees who staff it. The GIS infrastructure program has improved the planning and accuracy of our public safety, public works, and social welfare services.

Service and Performance Benefits

In addition to cost savings and productivity gains, OCTO's strategic plan implementation to date has produced performance and service benefits that take us well down the road to our vision of a city of access. For example, residents can now use the citywide call center number, 727-1000, to request city services. Residents and visitors can use the DC web portal, www.dc.gov, to obtain a wealth of information about city services, download forms, submit service requests, and link to a variety of other sites. District departments and agencies have developed web portal sites that provide not only detailed information, but also online services. Already residents all over the city can enter the DMV website through the DC web portal and conduct several of the most common vehicle transactions online. Businesses can go directly to the BRC site and conduct business lifecycle transactions electronically, without leaving their business offices. Residents and businesses can pay city taxes online. Numerous other electronic services are on the way.

Some city service improvements are less visible, but just as important. Across the city, agencies whose operations were manual just a few years ago now have automated operations and record-keeping. Several mission-critical agencies have used business process re-engineering projects to streamline processes, speed service delivery, and eliminate budget deficits. Through projects like data marts and case/workflow systems, separate agencies that serve the same populations, such as children or seniors, are beginning to coordinate their services and take advantage of new computer-based decision-making tools.

Perhaps the most important results of OCTO's strategic plan implementation to date are the least visible. With the completion of major IT budget, procurement, technical standards and infrastructure programs, the District has centralized IT capital budgeting and procurement processes, IT project tracking, and established consistent technical standards and a common systems architecture for agency projects. We're nearing completion of a comprehensive, citywide IT infrastructure that consolidates information storage, facilitates data sharing and coordinated functions among agencies, provides high-speed communications,

protects all our systems from tampering and service interruptions, and is powerful and flexible enough to support both planned and future applications. We're steadily shifting from reliance on outside IT consultants to a cadre of strong District IT managers. We've launched major programs to attract high-tech employers to locate here and provide new economy jobs for District residents. Beneath the visible surface of websites and electronic services, we're setting into place an enduring IT foundation to help the District realize its potential as a world-class city.

Information Technology Strategic Plan Capital Spending Summary

Goal	FY 2002 ($000's)
Stabilize IT operations	$2,315
Build enabling IT infrastructure	$111,243
Implement citywide applications	$23,990
Integrate citywide services and information	$2,564
Total	*$140,112*